



# National Museum of Health and Medicine

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## Otis Historical Archives

### OHA 247.05 Meyers Hologram Research Lab Collection

**Date of Records:** 1990s

**Size:** 2 Boxes

**Finding Aid:** Arranged by Grace Rodriguez (4/23/98); Revised by Eric W. Boyle (2012)

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**Series/Scope and Content Note:** Bert Meyers, M.D. produced the holograms at the Louisiana State University Medical Center in conjunction with the Veterans Affairs and Medical Center in New Orleans. For medical education and to create well-defined, operative medical images, Meyers advocated the use of holograms in opposition to hand-drawn and traditional photographic two-dimensional illustrations. However, after experimenting with the technique in the early 1990's, Meyers concluded that it was not practical.

Holographic images are made with precision optics and lasers. To record living subjects, green lasers in particular were used for their exceptional contrast in recording tissue containing hemoglobin. This collection contains reflection holograms which hover in virtual space since no light actually hits the image itself. From this perspective, an infinite number of images can be viewed according to the angle it is held at. A halogen light source is best for viewing holograms and fluorescent light is not recommended.

## BOX AND CONTENT LIST

### Video:

- *Using the Three Dimensions in Medicine.* Bert Meyers, M.D. LSUMC, New Orleans, LA. Length: 9 minutes 50 seconds. Video proposal in favor of holographic imaging for medical purposes. Highlighting the benefits and weaknesses of specific types of holograms according to their means of production, resolution and usefulness as carriers of visual information in the medical field.



#### **4"x5" Images:**

- 00001: Interior of human heart showing mild ventricular hypertrophy and normal mitral valve.
- 00002: Model of middle and inner ear.
- 00003: Human esophagus - squamous cell carcinoma.
- 00004: Normal human larynx - posterior view.
- 00005: Eleven week fetus - spina bifida.
- 00006: Human lumbar vertebra.
- 00007: Human colon - familial polyposis.
- 00008: Normal human larynx - prone view. Note vocal cords within. [2 & 15 written on plate].
- 00009: Head of femur.
- 00010: Calcaneus - medial side.
- 00011: Maxilla. [40' written on plate].
- 00012: Human liver - metastatic cancer
- 00013: Carcinoma of liver.
- 00014: Tulane (artificial) hip.
- 00015: Tulane hip.
- 00016: Temporal bone after radical mastoidectomy.
- 00017: Second cervical vertebra - axis.
- 00018: Human spleen.
- 00019: Adrenal gland with metastatic carcinoma.
- 00020: Scapula. [film ast written on plate].
- 00021: Calcaneus - lateral side.
- 00022: Aortic nodes with metastatic cancer.
- 00023: Human esophagus - obstructing squamous cell carcinoma (cancer).
- 00024: Two views of eleven week fetus with spina bifida.
- 00025: Human uterus with leiomyomata.
- 00026: Benign hypertrophy of prostate with dilated bladder.
- 00027: Head of humerus.
- 00028: Organs in base of neck - tracheostomy.
- 00029: Human colon - obstructing adenocarcinoma (cancer).
- 00030: Atlas.
- 00031: Carious tooth.
- 00032: Tooth after preparation for filling.
- 00033: Normal tooth.

#### **5"x7" Images:**

- 00001: Human hand showing arteries and veins.
- 00002: Human esophagus showing constricting squamous cell carcinoma.

#### **8"x10" Images:**

- 00001: Carcinoma of the lung.
- 00002: Carcinoma of the kidney.
- 00003: Human kidney showing stones and hydronephrosis.
- 00004: Carcinoma of the lung.
- 00005: Human hand showing flexor tendons.



00006: Interior of human heart showing normal mitral valve and slight ventricular hypertrophy.

00007: Two views of Tulane (artificial) hip.

00008: Human hand showing arteries and veins.